RACHINSKIY, Foma Yur'yevich; SLAVACHEVSKAYA, Nina Mikhaylovna; KHAVIN, Z.Ya., red.

[Chemistry of amino thiols and of somo of their derivatives] Khimiia aminotiolov i nekotorykh ikh proizvodnykh. Moskva, Khimiia, 1965. 295 p. (MIRA 19:1)

SLAVACHEVSKIY, Konstantin Akimovich, prof.; MASLOV, A.V., red.;
KOMAR'KOVA, L.M., red. izd-va; ROMANOVA, V.V., tekhn. red.

[Textbook for practical work in geodesy]Posobie k prakticheskim zaniatiiam po geodezii. Moskva, Geodezizdat, 1962. 170 p.
(MIRA 16:1)

(Geodesy)

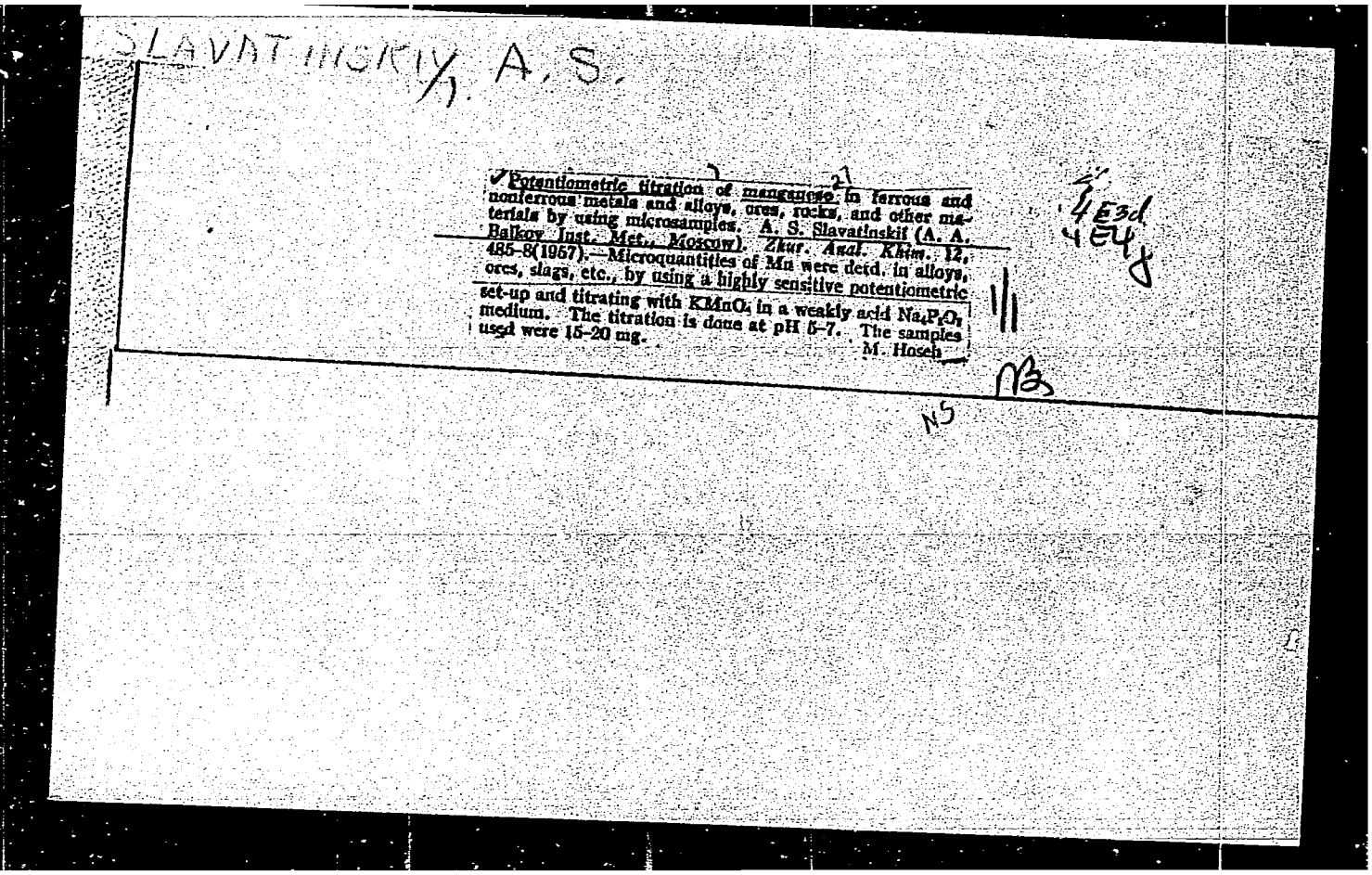
SLAVACHEVSKIY, Konstantin Akimovich, prof.; MASLOV, A.V., red.; KOMAR'KOVA, L.M., red. izd-va; ROMANOVA, V.V., tekhn. red.

[Textbook of practical exercises in geodetic surveying; computation and graphic work]Posobie k prakticheskim zaniatiiam po geodezii; raschetnye i graficheskie raboty. Moskva, Geodezizdat, 1962. 170 p. (MIRA 15:11)
(Surveying)

SLAVATA, Jaroslav, inz.

Development and prospects of the Krupp-Renn process. Rudy 11 no.10:349-352 O '63.

1. Rudny projekt, Praha.



SLAVATINSKIY, A. S.

Potentiometric titration of manganese in ferrous and nonferrous metals and alloys, ores, rocks, and other materials by using microsamples. A. S. Slavatinskii (A. A. Baikov Inst. Met., Moscow). *Zhur. Anal. Khim.* 12, 485–8(1957).—Microquantities of Mn were detd. in alloys, ores, slags, etc., by using a highly sensitive potentiometric set-up and titrating with $KMnO_4$ in a weakly acid $Na_4P_2O_7$ medium. The titration is done at pH 5–7. The samples used were 15–20 mg. M. Hoseh

21009

S/058/61/000/005/017/050
A001/A101

24.6900

AUTHORS: Slavatinskiy, A.S., Chernavskiy, D.S.

TITLE: Peripheral collisions

PERIODICAL: Referativnyy zhurnal. Fizika, no 5, 1961, 82, abstract 5B282 ("Tr. Mezhdunar. konferentsii po kosmich. lucham, 1959, v 1", Moscow, AN SSSR, 1960, 161 - 167)

TEXT: On the basis of the theory of Weizäcker-Williams the authors analyzed collisions of nucleons with anomalous angular distribution of secondary particles in the center-of-mass system and with low inelasticity coefficient. Pertaining stars are interpreted as a result of peripheral interaction. The following cases are considered: 1) when one of the nucleons suffers a central collisions with the π -meson of another nucleon; recoil and excitation of the other nucleon are neglected, and the process of decay of the excited state into secondary particles can be considered by the statistical theory or by the Fermi-Landau theory; 2) when the meson belonging to one nucleon collides with the meson of another nucleon; the number of secondary particles in this case can not be determined, and moreover, the application of the Fermi-Landau theory is difficult to

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Peripheral collisions

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substantiate. The result of comparing the theory with experimental data on π^-N-interactions shows that it is still too early to speak about agreement or disagreement. As far as $\pi\pi$ collisions are concerned, experiments indicate that the process is developing not according to the statistical theory (energy dissipation in this case is more complete). It is pointed out that for πN-interactions the calculation of peripheral collisions was performed by the perturbation theory in the sense of the work of Ch'u and Ch'u-Lou. The results of calculations agree with the data obtained by the Weizsäcker-Williams method, however, the perturbation theory provides for a more complete information.

A. Yemel'yanov

[Abstracter's note: Complete translation.]

Card 2/2

Bukovskiy VJ E

L 58716-65 EWT(m)/EPF(n)-2/EPR/EWP(t)/EWP(b)/EWA(h) Ps-4/Peb/Pu-4 IJP(c)
JD/...f/JG

AM5016875 BOOK EXPLOITATION UR/ 669:543/545+543.42

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B+1

Ponomarev, A. I., ed.

Chemical and spectrum analysis in metallurgy; a practical handbook (Khimicheskiy i spektral'nyy analiz v metallurgii; prakticheskoye rukovodstvo) Moscow, Izd-vo "Nauka", 1965. 382 p. illus., tables, index. (At head of title Akademiya nauk SSSR. Gosudarstvennyy komitet po chernoy i tsvetnoy metallurgii pri Gosplane SSSR. Institut metallurgii im. A. A. Baykova) Errata slip inserted. 3000 copies printed.

TOPIC TAGS: analysis, chemical analysis, physicochemical analysis, spectral analysis, slag analysis, steel analysis, iron analysis, alloy analysis, pure metal analysis, element determination, rare earth element determination, impurity determination

PURPOSE AND COVERAGE: This book is intended for specialists and workers at scientific-research and plant laboratories. The book describes chemical, physicochemical and spectral methods of analysing slags, steels, irons, various alloys, and some pure

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metals. The determination of rare and rare-earth elements is outlined. Part I of the book deals with the analysis of slags and the determination of basic elements and usual impurities, and describes methods of determining rare-earth elements. Part II deals with the analysis of cast irons and steels and describes, the determination of usual components and tungsten and molybdenum in the presence of niobium, as well as the determination of tantalum, niobium and cerium. Part III includes analysis of metallic chromium, niobium, titanium, nickel, and their alloys. Methods of determining cerium, indium, and gallium in metals and alloys are discussed along with the determination of rare-earth elements by applying the chromatographic method. Part IV deals with spectral analysis including photographic and other various methods. The following members of the Institute of Metallurgy participated in the work: A. A. Astanina, V. S. Nagibin, Ye. N. Kunenkova, Yu. I. Bykovskaya, L. I. Veselago, I. A. Golubeva, N. S. Gertseva, A. S. Slavutskiy, A. N. Shtoyenberg, N. V. Nikitina, and L. L. Lapchinskaya.

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TABLE OF CONTENT [Abridged]:

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AM5016875

4

SUB CODE: MM SUBMITTED: 19Jan65 NO REF SOV: 133

OTHER: 015 DATE ACC: 03Jun65

Card 3/3 dap

SLAVATINSKII, S. A.

1998 On the Applicability of Poisson's Law to the Special Distribution of Particles and on the Density Spectrum of Extensive Atmospheric Showers, M. I. Podgoretskii, I. L. Rozental, and S. A. Slavatinskii. Zhur. Eksptl. i Teoret. Fiz. 19, 1141-6(1949) (In Russian).

The interpretation of observations on extensive atmospheric showers is usually done on the assumption that the distribution of the shower particles is described by Poisson's law. A qualitative theoretical examination of the question by Podgoretskii (Doklady Akad. Nauk S.S.S.R. 68,23(1949) showed that, in view of the genetical relationship between particles, no strict realization of Poisson's distribution is possible; however, the deviations decrease with decreasing dimensions of the recording set-up. In the present paper an experimental verification of the foregoing conclusions is described, the method employed involving, in principle, the use of two groups of M counters; if n_1 and n_2 are the numbers of counters in each group recording a shower, and $\bar{n}_1$ and $\bar{n}_2$ are the corresponding arithmetical means from observations, the following equation is true, provided the Poisson law is obeyed: $n_1^2 = (1 - 1/M)\,\bar{n}_1\bar{n}_2 \pm \bar{n}_1$. The results showed that the special distribution of particles in extensiveatmospheric showers of average densities is represented, in the first approximation, by

(OVER)

SLAVATINSKIY, S. A.

USSR/Nuclear Physics - Cosmic Radiation Apr 49
Nuclear Physics - Ionization Chamber

"Narrow Atmospheric Showers of Cosmic Ray Particles," M. V. Nezlin, I. L. Rozenthal', S. A. Slavatinskiy, Phys Inst imeni P. N. Lebedev, Acad Sci USSR, 4 pp

"Dok Ak Nauk SSSR" Vol LXV, No 5

Introduces data obtained from recording triple coincidences of impulses in the Pamir mountains in summer 1948, with screened (lead) and unscreened counters of the master group. Concludes that narrow showers consist of electrons, photons, and penetrating particles. From films of shower in a Wilson Chamber, it follows that these components enter into the composition of "special" showers, while the soft component has marked directivity. Thus, supposition that generation of narrow showers occurs in the same processes in which "special" showers are generated is true. These processes must be the source of the nonequilibrium soft component.

Submitted by Acad D. V. Skobel'tsyn, 15 Feb 49

PA 39/49T99

SLAVATINSKIY, S. A.

USSR/Nuclear Physics - Cosmic Rays
Particles, Elementary

21 Nov 49

"Absorption Spectrum of Penetrating Particle Currents of Wide Atmospheric Showers in Cosmic Rays," G. T. Zatsepin, L. L. Rosental', S. A. Slavatinskiy, G. B. Khristiansen, L. A. Shyvayev, Phys Inst imeni Lebedev, Acad Sci USSR, 3 pp

"Dok Ak Nauk SSSR" Vol LXIX, No 3

Employed usual method of variation of area of counters, connected in coincidence scheme, and method of variation of "coincidence multiples," to determine subject spectrum and clarify nature of penetrating particles. Submitted 22 Jul 1949 by Acad D. V. Skobel'tsyn.

158T76

SLAVATINSKIY, S. A. Dec 49

USSR/Nuclear Physics - Cosmic Rays
Showers

"Altitude Behavior of the Penetrating Component of Wide Atmospheric Showers of Cosmic Rays," G. T. Zatsepin, I. L. Rosental', S. A. Slavatinskiy, Phys Inst imeni P. N. Lebedev, Acad Sci USSR, 4 pp

"Dok Ak Nauk SSSR" Vol LXIX, No 4

Gives results of observations conducted in summer 1948 on pamir at 3,860 and 4,700 meters. Number of coincidences per hour for various thicknesses of lead (0, 12, 20, 28, and 36 cm) was registered at both heights. Number of coincidences for 28 cm of lead was approximately 1.9 at 3,860 meters and 3.5 at 4,700 meters; for 36 cm of lead, there were no coincidences at 3,860 meters and 3.2 at 4,700 meters. submitted by Acad D. V. Skobel'tsyn 22 Jul 49

PA--155T48

SLAVATINSKIY, S. [A]

Masses of cosmic-ray particles. S. A. Azimov, N. Birger, N. Dobrotin, G. Zhdanov, Yu. Kokurin, and S. Slavatinskiy. Doklady Akad. Nauk S.S.S.R. 78, 447-50(1951).---New expts. to det. the nature and mass of cosmic particles were carried out at an altitude of 3860 m. by using 2 Wilson cameras in a magnetic field and with a hodoscope. The data show that if particles having masses between those of the -meson and the proton and having a life $>10^{-8}$ sec. exist in cosmic rays at altitude of 3-4 km. then their no. cannot exceed 10% of the no. of protons remaining in the same filters (30-105g./sq. cm. Pb).
J. R. L.

SLAVATINSKIY, S.A.

USSR .

Nature of the penetrating particles in electron-nuclear showers. S. A. Azimov, N. G. Birger, V. N. Polynov, and S. A. Slavatinskiĭ. *Doklady Akad. Nauk S.S.S.R.* 85, 287-90(1952); cf. *C.A.* 46, 4392*h*.—The app. described earlier was improved and further measurements are reported. The av. no. of particles in a shower is 5. The measurements show that of the penetrating particles in electron-nuclear showers which have an impulse $<2 \times 10^9$ e.v./*c* 30-50% are mesons and 50-70% are protons. J. R. L.

AZIMOV, S.; BIRGER, N.; DOBROTIN, N.; ZHDANOV, G.; KOKURIN, Yu.; SLAVATINSKIY, S.

Masses of particles of cosmic rays. Doklady Akad. nauk SSSR 78 no.3:447-450 21 May 1951. (CLML 20:9)

1. Physics Institute imeni P.N. Lebedev, of the Academy of Sciences USSR. 2. Presented by Academician D.V. Skobel'tsyn 13 March 1951.

Slavatinskiy, S. A. -- "An Investigation of the Nature of the Properties of Penetrating Particles of Electron-Nuclear Showers." Physics Inst. Acad Sci USSR, Moscow 1953. (Referativnyy Zhurnal--Fizika, Jan 54)

SO: Sum. 16[illegible], 22 July 1954

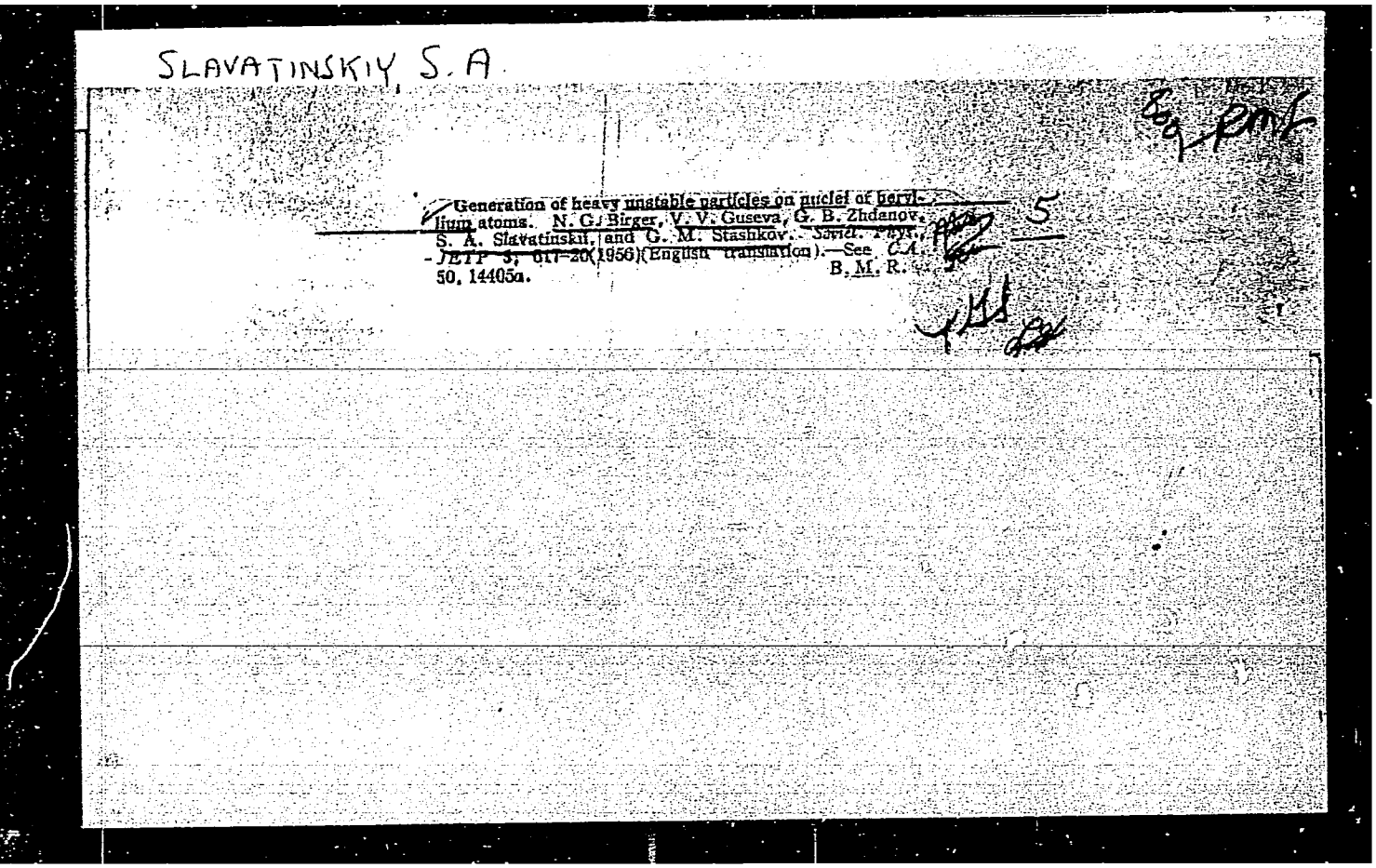
SLAVATINSKIY, S.A.

6004-RML

1730

INTERACTION OF COSMIC RAY PARTICLES OF 10^{12} TO 10^{11} ev WITH LIGHT NUCLEI MEASURED AT 4Km ELEVATION. N. G. Birger, V. V. Guseva, G. B. Zhdanov, S. A. Slavatinskii, and G. M. Stashkov. Izvest. Akad. Nauk S.S.S.R. Ser. Fiz. 19, 546(1955) Sept.-Oct. (In Russian)

Most of the observed showers had four or more charged particles. The mean of the angular distribution of shower particles in the center of gravity of the two colliding nucleons was symmetric and close to isotropic. Also, the spectrum of shower particle momenta formed in the light matter was obtained in the interval of 5×10^8 to 3×10^9 ev/c. (R.V.J.)



SLAVATINSKIY, S. A.

Generation of heavy unstable particles on nuclei of beryllium atoms. N. G. Birger, V. V. Guseva, G. B. Zhdanov, S. A. Slavatinskii, and G. M. Stashkov. *Zhur. Eksp. i Teor. Fiz.* 30, 611-20(1956)(English translation).—See *C.A.* 50, 14405a. B. M. R.

SLAVATINSKIY, S.A.

Category : USSR/Nuclear Physics - Elementary Particles C-3

Abs Jour : Ref Zhur - Fizika, No 1, 1957, No 421

Author : Birger, N.G., Guseva, V.V., Zhdanov, G.B., Slavatinskiy, S.A., Stashkov, G.M.

Inst : Phys. Inst., USSR Acad. of Sciences

Title : Certain Cases of Generation of Heavy Particles by Nuclei of Be Atoms.

Orig Pub : Zh. eksperim. i teor. fiziki, 1956, 30, No 3, 590-591

Abstract : A Wilson chamber placed in a magnetic field and located at an altitude of 3860 meters above sea level recorded three showers, generated in Be, in which the formation and decay in flight of Σ^+, Λ^0, and Θ^0 heavy particles. The angles φ between the plane of generation of the unstable particle and the plane of its decay are 57 ± 10^0, 74 ± 10^0, and 15 ± 5^0 respectively. These results can be compared with the fact that in the case of pair generation of hyperons and K-particles by π^- -mesons and H, the angle φ is in every case less than or equal to 40^0. The difference in the results obtained is apparently due to the presence of secondary processes occurring inside the Be nucleus (scattering of hyperons or creation of hyperons by secondary particles of the shower).

Card : 1/1

~~SLAVATINSKIY, S.A.~~ SLAVATINSKIJ, S.A.

SUBJECT USSR / PHYSICS CARD 1 / 2 PA - 1848

AUTHOR BIRGER,N.G., GUSEVA,V.V., KOTEL'NIKOV,K.A., MAKSIMENKO,V.M., RJABIKOV,S.V., SLAVATINSKIJ,S.A., STAŠKOV,G.M.

TITLE The Analysis of the Cases of the Production of Mesons by Particles of Cosmic Radiation. II.

PERIODICAL Žurn.eksp.i teor.fis,31, fasc.6, 982-986 (1956)
Issued: 1 / 1957

Three such cases are described here. For the direct measuring of the energy of the particles producing electron-nucleon showers the authors in the winter of 1955-1956 added a further WILSON chamber fitted below the gap of the electromagnet to their apparatus (described by BIRGER et al., Zurn.eksp.i teor. fis, 31, 971 (1956)). The charged particle is deflected after passage through the upper chamber by the field of the electromagnet with a field strength of about 10^4 Ørsted. In the lower chamber the trace of the primary particle can be followed on a beryllium plate, and from the traces of the secondary particles the point of the production of the shower in the beryllium plate is determined. From the deviation of this point from the direction of the motion of the particle before being deflected in the magnetic field it is possible to determine the momentum and the sign of the charge of the shower-producing particle. In the case under investigation p_{max}=50 BeV/c. However, by using two WILSON chambers the "light intensity" of the device was considerably diminished. Altogether, four pictures of showers with more than four charged secondary particles were taken, from which it was possible to determine

Žurn. eksp. i teor. fis., 31, fasc. 6, 982-986 (1956) CARD 2 / 2 PA - 1848

the momentum of the primary particles. In the case of three showers it was possible to determine the distribution of the energy of the primary particle over the secondary particles and the angular distribution of the particles in the center of mass system.

Shower No 27.16.: The particle producing this shower, which has a positive charge, is most probably a proton. If a nucleon-nucleon collision is assumed the conservation of energy and momentum within the limits of measuring errors holds, if a neutron emitted under a small angle carried off a momentum of about 2,3 BeV/c. Reaction must then develop according to the scheme $p + p \rightarrow 3\pi^+ + 2\pi^- + p + n$. Conservation of charge excludes the possibility of pn-interaction. The angle of emission and the momentum of the particles are shown in a table.

Shower No 68.18.: The primary particle is apparently a negative pion with ~ 6,5 BeV, which has been produced in the graphite filter arranged above the measuring device. This shower was probably produced by the reaction $\pi^- + n \rightarrow 2\pi^+ + 3\pi^- + p + m\pi^0$, where m denotes the number of neutralized pions.

Shower No 6.116.: The momentum of the primary particle amounted to 54 BeV/c. The process was able to take its course according to one of the following schemes: $p + n \rightarrow 3\pi^+ + 2\pi^- + n + m + k\pi^0$ or $p + p \rightarrow 3\pi^+ + 2\pi^- + p + n + k\pi^0$.

INSTITUTION: Physical Institute "P.N.LEBEDEV" of the Academy of Science in the USSR

3754

INTERACTION OF 5-50 Bev COSMIC RAY PARTICLES WITH Be NUCLEI. I. N. G. Birger, N. I. Grigorov, V. V. Guseva, G. B. Zhdanov, S. A. Slavatinskii, and G. M. Stashkov (Academy of Sciences, USSR). Soviet Phys. JETP 4, 872-82(1957) July.

Meson production by cosmic ray particles with energy 5 to 50 Bev was investigated in a cloud chamber containing a 9.8 gm/cm^2 Be plate under conditions closely approximating nucleon-nucleon interaction. Eleven interactions involving formation of four or more secondary charged particles are analyzed in detail. The angular distribution of pions and nucleons in the center-of-mass system of the two colliding nucleons was obtained, as well as the energy distribution of the energy of the primary particle among the various secondary particles. (auth)

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SLAVATINSKIY, S.

CONCERNING A PECULIARITY IN THE INTERACTION OF PARTICLES WITH ENERGY > 10^{11} ev

N. Birger, S. Slavatinskiy, Yu. Smorodin

Kinematic analysis is applied to photographs of the interaction of nucleons of energy $E_0 > 10^{11}$ ev with nuclei. From conservation laws it foollows that the magnitude of $\Sigma (E_i - P_i) + P_i (I - \cos \theta_i)$ is close to the mass of the target.

In most cases of the observed interactions summation over all registered particles yields a value on the left-hand side that is close to the mass of a pi-meson. If the possibility of a loss of pi-mesons emerging at angles close to 90^0 is excluded, then the pi-meson should be considered as the target in the cases considered.

Report presented at the International Cosmic Ray Conference, Moscow, 6-11 July 1959

SLAVATINSKIY, S. A.

INTERPRETATION OF MULTIPLE FORMATION OF MESONS AT ENERGIES OF ~ 10^{11} ev

V. M. Maksimenko and S. A. Slavatinskiy

An analysis is given of experimental data on the multiple production of mesons in nucleon-nucleon collisions with energies ~10^{11}ev. The experimental data are correlated with calculations made on the basis of statistical theory.

In the analyzed canes the experimental data are found to be in agreement with calculations on multiplicity, and there is a considerable divergence in the impulse distribution of mesons.

Report presented at the International Cosmic Ray Conference, Moscow, 6-11 July 1959.

SLAVATINSKIY, S. A.

DETERMINING THE ENERGY OF PAST PARTICLES THROUGH ANGULAR DISTRIBUTION OF THE REACTION PRODUCTS

A. I. Nikishov, I. L. Rozental, and S. A. Slavatinskiy

In this paper an analysis is made of errors in determinations of the energy of the primary particle from the angular distribution of secondary particles. Due to fluctuations in the number of generated particles and in their angles of emergence and the sharp decrease in the spectrum of primary particles $\frac{dN(E)}{dE} \sim E^{-2.7}$ the energy value may be systematically overestimated. The extent of this overestimation depends on the law of fluctuations in the number of particles and angles (at a given energy), which at present can be estimated only in a very approximate manner. From an analysis of experimental data on shower energy determined from the angular distribution of secondary particles and measured directly, an attempt is made to determine the dispersion of distribution that characterizes the elementary act.

The error in the determination of the energy of showers produced on heavy nuclei is also considered. This error arises due to indeterminacy in the length of the nuclear tube with which the collision occurs.

Report presented at the International Cosmic Ray Conference, Moscow, 6-11 July 1959

SLAVATINSKIY, S. A.

A STUDY OF THE INTERACTION OF NUCLEOUS WITH ENERGY (I - 5) x 10^{11} ev WITH LIGHT ATOMIC NUCLEI

N.L. Grigorev, V.V. Guseva, N.A. Dobrotin, K.A. Kotelnikov, V.B. Murzin, S.V. Ryabikov, S.A. Slavatinskiy

1. The interaction of cosmic-ray nucleons with atomic nuclei has been investigated at 3860 m above sea level (Pamire Station of the Physics Institute, Academy of Sciences, U.S.S.R.) with the aid of an arrangement that permits of a comprehensive study of an individual acto of nucear interaction.

2. The arrangement consisted of two cloud chambers with a target of a light subst nce (LiH in the main series of experiments) interposed between them. In this target the interactions under study were generated. The bottom cloud chamber was placed in a 6500-oersted magnetic field, which enabled us to measure directly the pulses of secondary particles. Under the chambers was a special device ("ionization calorimeter") made up of 120 ionization chambers arranged in 8 trays with filters between them. This device made it possible (from the total amount of energy generated) to determine the energy of the particle that produced the interaction being studied.

Report presented at the International Cosmic Ray Conference, Moscow, 6-11 July 1959

SLAVATINSKIY, S. A., DOBROTIN, Nikolay A.,

"Study of Nucleon-Nucleon Interaction at Hundreds of Bev"

paper presented at the Intl Conference on High Energy Physics, Rochester, N. Y. and/or Berkly California, 25 Aug - 16 Sep 1960.

SLAVATINSKIY, S.A.

S/058/61/000/010/017/100
A001/A101

3,2410

AUTHORS: Grigorov, N.L., Guseva, V.V., Dobrotin, N.A., Lebedev, A.M., Kotel'nikov, K.A., Murzin, V.S., Rappoport, P.D., Ryabikov, S.V., Slavatinskiy, S.A.

TITLE: Studying nucleon-nucleon interactions at $\sim 2 \times 10^{11}$ ev energies

PERIODICAL: Referativnyy zhurnal. Fizika, no. 10, 1961, 96, abstract 10B501 ("Tr. Mezhdunar. konferentsii po kosmich. lucham, 1959, v. 1", Moscow, AN SSSR, 1960, 140 - 153)

TEXT: The authors present the results of an investigation, by means of the "calorimetric" method, of nucleon-nucleon interactions at energies of $\sim 2 \times 10^{11}$ ev, conducted at Pamir (3,860 m above sea level). They describe the equipment for determining the energy of primary particles, energy distribution of secondary particles, inelasticity coefficient, and present data on correlated pairs, angular distributions of particles in individual interactions, and consider in detail symmetric and non-symmetric showers.

L. Dorman

[Abstracter's note: Complete translation]

Card 1/1

S/058/61/000/010/018/100
A001/A101

3.2410

AUTHORS: Birger, N.G., Slavatinskiy, S.A., Smorodin, Yu.A.

TITLE: On one peculiarity of interaction of particles with average energy of 200 Bev

PERIODICAL: Referativnyy zhurnal. Fizika, no. 10, 1961, 96, abstract 10B502 ("Tr. Mezhdunar. konferentsii po kosmich. lucham, 1959, v. 1", Moscow, AN SSSR, 1960, 154 - 156)

TEXT: Kinematical method of analysis is applied to investigations of interactions of particles with average energy of 200 Bev. The method makes it possible to determine effective mass of the target nucleus.

[Abstracter's note: Complete translation]

B

Card 1/1

S/058/61/000/010/019/100
A001/A101

3,2410

AUTHORS: Nikishov, A.I., Rozental', I.L., Slavatinskiy, S.A.

TITLE: On energy determination of fast particles from angular distribution of their interaction products

PERIODICAL: Referativnyy zhurnal, Fizika, no. 10, 1961, 96, abstract 10B503 ("Tr. Mezhdunar. konferentsii po kosmich. lucham, 1959, v. 1", Moscow, AN SSSR, 1960, 157 - 160)

TEXT: To determine energies of fast particles, a method is employed which is based on the analysis of angular distribution of secondary particles and very simple relations of the relativistic kinematics. Two assumptions are made in the method: 1) velocities of secondary particles are close to velocity of light; 2) dispersion of particles in the system connected with the gravity center, proceeds symmetrically relative to the plane perpendicular to the line of motion. A possible effect of non-symmetric showers on energy determination is estimated, and collision of a nucleon with a heavy nucleus is considered in detail.

L. Dorman

[Abstracter's note: Complete translation]

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82749
S/026/60/000/007/001/008
A166/A029

3.9000

AUTHOR: Slavatinskiy, S.A., (Moscow)

TITLE: The Earth's External Radiation Belt

PERIODICAL: Priroda, 1960, No. 7, pp. 3 - 6

TEXT: In 1960 the following Soviet scientists were awarded the Lenin Prize for their research into the earth's outer radiation belt and the magnetic fields of the earth and the moon: Corresponding Member of the USSR Academy of Sciences S.N. Vernov; Doctor of Physics and Mathematics A.Ye. Chudakov; Director of the Institut zemnogo magnetizma, ionosfery i rasprostraneniya radiovoln Akademii nauk SSSR (Institute of Terrestrial Magnetism, the Ionosphere and the Propagation of Radio Waves at the USSR Academy of Sciences) N.V. Pushkov, and the Head of the Magnetics Laboratory of the Institute of Terrestrial Magnetism, the Ionosphere and the Propagation of Radio Waves Sh.Sh. Dolginov, both associates of the Fizicheskiy institut imeni P.N. Lebedeva Akademii nauk SSSR (Physics Institute imeni P.N. Lebedev at the USSR Academy of Sciences). Data obtained from the Soviet and American sputniks have led to a closer knowledge of the earth's radiation belt. The Third Soviet Sputnik carried a scintillation counter to record radiation intensity, which showed that the radiation at the poles

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The Earth's External Radiation Belt

is thousands of times greater than radiation at the upper limit of the atmosphere. This radiation is composed of electrons with an energy ranging from 10 kev to several Mev. Comparison of this data with data obtained by van Allen has shown that the heightened radiation zone corresponds to the distribution of the lines of the earth's magnetic field, which form a "trap" for charged particles. The concentration of the force lines around the poles repel most of the charged particles, which then circulate along the polar lines of force, changing from one hemisphere to the other (Fig. 2). Current theory maintains that there are two distinct radiation belts around the earth - an outer belt stretching from the northern to the southern polar region and an inner belt embracing the equatorial region. The inner belt consists of high-energy protons, which distinguishes it from the outer belt. Soviet scientists think that the belt is formed from neutrons resulting from the break-up of atmospheric atomic nuclei under cosmic irradiation. The neutrons are radioactive with a life of 15 min and decay into protons, electrons and neutrinos, of which the protons and electrons are captured by the magnetic lines of force and accumulate to form the inner radiation belt. The outer belt is formed from low-energy electrons discharged from the sun and which distort the earth's magnetic field sufficiently to penetrate the outer radiation belt where they are caught in the magnetic "trap". This theory is con-

The Earth's External Radiation Belt

firmed by the fact that the outer belt "breathes", changing its position and the number of trapped particles. The inner belt is much more stable in this respect. The outer belt sometimes contracts sufficiently to touch the upper layers of the atmosphere, which is probably the cause of polar auroral and magnetic storms. The radiation intensity of the outer belt is so strong that ring currents form and partially screen the earth's magnetic field. The radiation here is many times greater than the maximum permissible dose and could constitute a health hazard to future space travelers. There are 2 diagrams.

ASSOCIATION: Fizicheskiy institut imeni P.N. Lebedeva Akademii nauk SSSR (Physics Institute imeni P.N. Lebedev at the USSR Academy of Sciences)

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SLAVATINSKY, S.A., DOBROTIN, N.A., GUSEVA, V.V., ZELEVINSKAYA, N.G., KOTELINKOV, K.A., and LEBEDEV, A.N.,

"Experimental Data on Nucleon-Nucleon-Interaction at the Energy of Hundreds of Gev and Their Interpretation,"

report presented at the Intl. Conference on Cosmic Rays and Earth Storms, Kyoto, Japan, 4-15 Sept 1961.

SLAVATINSKIY, S.A.

2

24.6700

S/048/62/026/005/001/022
B102/B104

AUTHORS: Cuseva, V. V., Dobrotin, N. A., Zelevinskaya, N. G., Kotel'nikov, K. A., Lebedev, A. M., and Slavatinskiy, S. A.

TITLE: Experimental data on nucleon-nucleon interactions at ~100 Bev and their interpretation

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 26, no. 5, 1962, 549 - 557

TEXT: Experimental data on NN-interactions, obtained by a team of the Laboratory of Cosmic Rays of the Physics Institute AS USSR at its Pamir station (3860 m), are discussed. Photographs of such interactions revealed the presence of showers with asymmetric particle emission in the c.m.s. Of 48 showers, 18 showed marked asymmetry. The data obtained with the arrangement shown in Fig. 1 were evaluated by conventional statistical methods and also by the Monte-Carlo method. It is shown that the probability of asymmetric showers being caused by fluctuations in the meson angular distribution does not exceed some per cent. The fact that the shower symmetry depends on the inelasticity ratio of the interacting nucleons

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allows NN-interactions to be divided into three classes: (1) symmetric showers with small and approximately equal coefficients of inelasticity K_{lab} and K_{mirror}; (2) asymmetric showers with very different coefficients; and (3) symmetric showers with both coefficients being large ($K > 0.4$). It is explicitely shown that the experimental results can be interpreted with the aid of a simple structural model of interactions for the above classes: (1) peripheral-- peripheral interactions; (2) peripheral - central interactions; and (3) central - central interactions. In collisions of class (2), for example, the periphery of one nucleon is assumed to interact with the center of the other. The data obtained also show that an excited meson cloud appears in ~100 Bev NN-collisions, which does not contain the colliding nucleons. In general, this cloud moves slowly relative to the c.m.s., and decomposes isotropically when its temperature reaches a value $T \sim \mu_\pi$. The "spectrum" of the radiation or energy distribution of the mesons is comparable with that of an absolutely black body. There are 12 figures.

ASSOCIATION: Laboratoriya kosmicheskikh luchey Fizicheskogo instituta im. P. N. Lebedeva Akademii nauk SSSR (Laboratory of Cosmic Rays of the Physics Institute imeni P. N. Lebedev of the Academy of Soiences, USSR)

SLAVATINSKIY, S.A., kand.fiziko-matem.nauk

New high-altitude station for the study of cosmic rays. Vest.AN SSSR 32 no.7:100-102 Jl '62. (MIRA 15:7)
(Tien Shan—Cosmic rays—Research)

S. A. [illegible]ROVINA, A. M. LEBEDEV, A. E. MOROZOV, [illegible] SANKO, [illegible]SKIY, S. A. SLAVATINSKIY, B. V. TOLKACHEV

[illegible] Experimental Data on Interactions of Nucleons and Atomic Nuclei [illegible]

[illegible] the 6th Intl. Conf. on Cosmic Rays (IUPAP), Jaipur India, [illegible]

S/030/63/000/003/010/014
B117/B186

AUTHOR:: Slavatinskiy, S. A., Candidate of Physics and Mathematics

TITLE: Conference on high-energy physics

PERIODICAL: Akademiya nauk SSSR. Vestnik, 33 no. 3, 1963, 117-118

TEXT: This is a brief communication on the VIII yezhegodnaya konferentsiya sotsialisticheskikh stran (8th Annual Conference of the Socialist Countries) which took place at the end of September 1962 in a resort on lake Balaton (Hungaria). The Conference dealt primarily with investigation into the nature and properties of elementary particles. Among numerous problems dealt with in this report two are pointed out in particular: the resonant states of the nuclear matter (proof of the existence of σ-, ζ- and η-mesons) and the structure of elementary particles. In connection with the former problem the lecture held by M. I. Podgoretskiy (USSR) on the electromagnetic decay of the η-meson is mentioned and it is pointed out that most of the experimental data were obtained with the accelerator of the Ob"yedinennyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research) in Dubna. Lectures on the second problem confirmed the model suggested by D. I. Blokhintsev

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in 1956 i. e. that the total mass of the nucleon is concentrated in the central part, the nucleus and that this nucleus is surrounded by a shell consisting of the pions, the lightest particles of nuclear matter. The present, authors lecture also was devoted to the nucleonic structure: If nucleons are bombarded with high-energy nucleons, apparently for the most part only the collision between the outer shells of the two nucleons takes place, causing the formation of an excited cluster of nuclear matter, the "fire ball". The formation of one of the two clusters has been reported by M. Miyczovich and Ya. Gerulya from Poland who had been the first to observe two clusters earlier.

DOBROLIN, N.A.; ZELEVINSKAYA, N.G.; MAKSIMENKO, V.M.; PUCHKOV, V.S.; SLAVATINSKIY, S.A.

Pulsed spectrum of π-mesons generated in nucleon interactions involving energies of hundreds of Bev. Izv. AN SSSR. Ser. fiz. 28 no.11:1751-1754 N '64. (MIRA 17:12)

1. Fizicheskiy institut im. P.N. Lebedeva AN SSSR.

SLAVATINSKIY, S.A.; PETISOV, I.N.

Cross sections of the generation of K^0-mesons and hyperons at energies of hundreds of Bev. Izv. AN SSSR. Ser. fiz. 28 no.11:1758-1760 N '64. (MIRA 17:12)

1. Fizicheskiy institut im. P.N. Lebedeva AN SSSR.

3C

L 3h71h-65 EWG(j)/EWT(m)/FCC/T/EWA(m)-2 IJP(c)

ACCESSION NR: AP4049587 S/0048/64/028/011/1761/1763 23 18 B

AUTHOR: Guseva, V.V.; Dubrovina, S.A.; Lebedev, A.M.; Morozov, A.Ye.; San'ko, L.A.; Sokolovskiy, V.V.; Slavatinskiy, S.A.; Tolkachev, B.V.

TITLE: Nucleon-nucleus collisions at high energies /Report, All-Union Conference on the Physics of Cosmic Rays held in Moscow 4 to 10 Oct 1963/

SOURCE: AN SSSR. Izv. Seriya fizicheskaya, v.28, no.11, 1964, 1761-1763

TOPIC TAGS: cosmic ray, high energy interaction, nucleon nucleus interaction, hydrodynamic theory

ABSTRACT: The work presents an attempt to describe the interaction of high-energy (10^{11} to 10^{12}) nucleons with complex nuclei from the standpoint of a succession of statistically independent encounters of the incident particle with the nucleons of the target nucleus. The nucleon interaction cross sections were calculated by the classical method of impact parameters. The Hofstadter data on electron scattering were used to evaluate the proton densities. Numerical calculations were carried out for the cross sections for nuclei with A = 6, 9, 12, 14, 16, 56, 122 and 207. The

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L 34734-65

ACCESSION NR: AP4049587

calculated values of σ are in good agreement with the power function $\sigma = \sigma_0 A^{3/4}$. Further, there were calculated the values of the mean fraction $\bar{\Delta}$ of the energy retained by the nucleon after interaction with a complex nucleus. The results of these calculations are compared with some experimental data in Fig.1 of the Enclosure. The agreement is best (but far from perfect) on the assumption of an inelasticity coefficient 0.35 ($\bar{\Delta}_0 = 0.65$). The values of the anisotropy parameter (proportional to $\sigma/\sigma_{isotropic}$) as a function of the jet multiplicity n_s (which may be taken as a measure of the length of the reaction tube or the number of nucleons with which the incident particle interacts) obtained by interpolation of the experimental data are compared in Fig.2 of the Enclosure with the functional dependence calculated on the basis of hydrodynamic theory; here the disagreement is substantial. This is interpreted as an argument in favor of the assumption of successive interaction of the incident nucleon with the nuclear nucleons. "The authors are grateful to N.A.Dobrotin, Ye.L.Feynberg, G.B.Zhdanov and D.S.Chernavskiy for discussions and valuable suggestions." Orig.art.has: 4 formulas and 2 tables.

2/4

L 34714-65

ACCESSION NR: AP4049587

ASSOCIATION: Fizicheskiy institut im.P.N.Lebedeva Akademii nauk SSSR (Physics Institute, Academy of Sciences, SSSR)

ENCL: 01

SUBMITTED: 00

OTHER: 002

NR REF SOV: 007

SUB CODE: AA, NP

3/4

ACCESSION NR: AP4042580 S/0056/64/046/006/2151/2155

AUTHORS: Lebedev, A. M.; Slavatinskiy, S. A.; Tolkachev, B. V.

TITLE: Interaction cross section and energy fraction retained by nucleons in collisions with complex nuclei

SOURCE: Zh. eksper. i teor. fiz., v. 46, no. 6, 1964, 2151-2155

TOPIC TAGS: nucleon, nucleon scattering, nuclear structure, nucleus, inelastic scattering

ABSTRACT: In view of recent deductions that the nucleons are not uniformly distributed in nuclei, and in view of the more accurate values of the mean square radius of the nucleon and of the elementary cross section obtainable from measurements with accelerators, the authors calculate cross sections for the inelastic interaction of nucleons with complex nuclei on the basis of the optical model of the nucleus. The dependence of the interaction cross section on the

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atomic weight of the nucleus of the target is evaluated with allowance for the nuclear structure and by using more refined data on the elementary cross sections. The obtained dependence of the cross section on the atomic weight of the target nucleus, $\sigma = \sigma_0 A^{3/4}$, is in good agreement with the experimental data, over a wide range of energies, from $\sim 10^{10}$ to $\sim 10^{12}$ eV. The values calculated on the basis of the model of successive collisions between the nucleon and the nucleons of the nucleus yield for the fraction of the energy retained by the nucleon after interaction with complex nuclei values which do not disagree with the measurement results. The authors calculate the multiplicity of the collisions for different nuclei, as well as the fraction of the energy retained by the nucleon after the interaction. "In conclusion the authors are deeply grateful to N. A. Dobrotin for continuous interest in the work and for stimulating it, to Ye. L. Feynberg and A. Ye. Chudakov for useful advice,

LEBEDEV, A.M.; SLAVATINSKIY, S.A.; TOLKACHEV, B.V.

Interaction cross section and the fraction of energy conserved by nucleons in collisions with complex nuclei. Zhur.eksp.i teor.fiz. 46 no.6:2151-2155 Je '64.

1. Fizicheskiy institut imeni P.N. Lebedeva AN SSSR.
(MIRA 17:10)

L 4477-66 EWT(l)/EWT(m)/FCC/T/EWA(h) IJP(c) GW

ACC NR: AP5024619 SOURCE CODE: UR/0048/65/029/009/1627/1630

AUTHOR: Dobrotin, N.A.; Zelevinskaya, N.G.; Kotel'nikov, K.A.; Maksimenko, V.M.; Puchkov, V.S.; Slavatinskiy, S.A.; Smorodin, Yu. A. 28 B

ORG: none

TITLE: Phenomenological picture of secondary particle production in nucleon interactions at hundreds and thousands of BeV. /Report, All-Union Conference on Cosmic Ray Physics held at Apatity 24-31 August 1964/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 29, no. 9, 1965, 1627-1630

TOPIC TAGS: primary cosmic ray, secondary cosmic ray, pi meson, high energy particle, particle production

ABSTRACT: The authors briefly review the experimental data on secondary particle production by primary cosmic rays. The inelastic interaction cross section is practically constant for energies from 20 to 10^5 BeV, and the inelasticity is constant and equal to 0.4-0.5 for energies up to 10^4 BeV. About 90% of the secondaries are pions. Two production mechanisms are distinguished: fireball production, and production and decay of excited nucleons (isobars). Most of the secondaries are produced by the fireball mechanism. In the hundred BeV range there is a reference system in which the pions are emitted isotropically. In this system the pion energy distribution can be represented, except for a high-energy tail, by a Bose-Planck function for a temperature of 0.7-1.0

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L 4477-66

ACC NR: AP5024619

pion masses. In the thousand BeV region there are indications that two or more fireballs may be produced. The high-energy tail on the pion energy distribution is ascribed to decay of highly excited isobar states. It is shown that the exponents in the atmospheric energy spectra of nuclear-active particles and of high-energy photons (ascribed to pion decay) are very nearly the same. From this it is concluded that the energies of the high-energy pions are proportional to the energies of the primaries producing them. Only a few (one or two) high energy pions are produced in each interaction, and these carry 10-20 % of the incident particle energy. It is anticipated that counter installations now under construction will provide more accurate data on both pion production mechanisms in the thousand MeV range. Orig. art. has: 6 formulas, 2 figures, and 1 table.

SUB CODE: NP/ SUBM DATE: 00/ ORIG REF: 007/ OTH REF: 009

Card 2/2

L 4403-66 EWT(l)/EWT(m)/FCC/T/EWA(m)-2/EWA(h) GW

ACC NR: AP5024622 SOURCE CODE: UR/0048/65/029/009/1640/1643

AUTHOR: Zelevinskaya, N.G.; Maksimenko, V.M.; Slavatinskiy, S.A.; Sokolovskiy, V.V.

ORG: none

TITLE: On the angular distribution of secondaries in elementary multiple production events at high energies /Report, All-Union Conference on Cosmic Ray Physics held at Apatity 24-31 August 1964/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 29, no. 9, 1965, 1640-1643

TOPIC TAGS: primary cosmic ray, secondary cosmic ray, nucleon interaction, inelastic interaction, pi meson, particle production

ABSTRACT: The authors have calculated the distribution to be expected for elementary multiple production events with respect to the absolute difference between the numbers of forward and backward secondaries on the assumptions that energy, momentum, and charge are conserved, that all the secondaries are ultrarelativistic pions, and that the probability for any possible distribution of momentum among the secondaries is proportional to the corresponding volume of phase space. The details of this calculation are not discussed, but the results are presented and are compared with the observed distribution for multiple production events of multiplicity 4 or greater. Many more highly asymmetric events are observed than are predicted by the calculation, and it is concluded that statistical factors cannot account for the asymmetry of multiple

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L 4463-66

ACC NR: AP5024622

production. One must take account of the asymmetry of multiple production when investigating the energy dependence of different features of the process. In particular, the apparent energy dependence of the inelasticity found by W. Fretter and L. Hansen (Phys. Rev., 118, 812, 1960) and by I. Kita and G. Fujioka (J. Phys. Soc. Japan, 16, 1099, 1107, 1961) can be accounted for in terms of an energy independent inelasticity and an asymmetric multiple production process. Orig. art. has: 6 formulas, 2 figures, and 1 table.

SUB CODE: NP/ SUBM DATE: 00/ ORIG REF: 003/ OTH REF: 003

Card 2/2

GUSEVA, V.V.; LEBEDEV, A.M.; SLAVATINSKIY, S.A.; SOKOLOVSKIY, V.V.

Interaction between nucleons and complex nuclei at high energies.
Izv. AN SSSR.Ser.fiz. 29 no.10:1935-1937 O '65.
(MIRA 18:10)

ACC NR: AP7007076 SOURCE CODE: UR/0048/66/030/010/1577/1580

AUTHOR: Denisov, Ye. V.; Dedenko, L. G.; Dubrovina, S. A.; Kotel'nikov, K. A.; Morozov, A. Ye.; Ogurtsov, O. F.; Sokolovskiy, V. V; Slavatinskiy, S. A.; Fetisov, I. N.

ORG: Physics Institute im. P. P. Lebedev, AN SSSR (Fizicheskiy institut AN SSSR)

TITLE: Nuclear cascade process in an ionization calorimeter /Paper presented at the All-Union Conference on Cosmic radiation physics, Moscow, 15-20 Nov 1965/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 30, no. 10, 1966, 1577-1580

TOPIC TAGS: pi meson, calorimeter, proton

SUB CODE: 20

ABSTRACT: Results of the calculation of the nuclear cascade process in an iron absorber were correlated with experimental data obtained on the ionization calorimeter of the Tyan'-Shan' Cosmic Ray Station. It was established that at E_0 = 300 Bev approximately 30% of the energy spent being carried away by strongly ionizing particles ("black tracks"), and the rest by protons with an energy of $\sim$ 150 Mev ("grey tracks"). Errors in the measurement of E_0 = 200 Bev associated with fluctuations in the recording of strongly ionizing particles amounted to $\sim$ 12% ($\sim$ 11% for "black tracks" and $\sim$ 4% for "grey tracks"). In measurements by means of an ionization calorimeter of the energy transmitted to π^0 mesons, ionization produced by particles originating from nuclear splitting must be considered. The authors thank N. A. Dobrotin and V. S. Murzin for valuable critical observations, V. G. Ignat'yevaya, Z. G. Yeremina-ya,

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ACC NR: AP7007076

L. V. Shibayevaya and N. S. Kochurkinaya for processing the experimental data. Orig. art. has: 2 figures, 2 formulas and 1 table. [JPRS: 39,658]

Card 2/2

SLAVCHENKO, A.G.

USSR

1338. X-ray structural analysis of solid solutions (Ba, Pb) TiO_3. I. G. [illegible]
A. G. SLAVCHENKO (*J. tech. Phys.*, Moscow, 24, 1288, 1954).

SLAVCHENKO, Nikolay Antonovich; BERNSHTEYN, Ya.I., red.; SOKOL'SKIY, I.F., red.izd-va; VOLKOV, S.V., tekhn.red.

[Power engineering handbook for engineers in electric power stations, electric and thermal systems] Spravochnik energetika gorodskikh elektrostantsii, elektricheskikh i teplovykh setei. Moskva, Izd-vo M-va kommun. khoz. RSFSR, 1957. 590 p. (MIRA 11:3)
(Electric engineering) (Power engineering)

GLADKIY, V.I.;LOBANOV, M.I.; SLAVCHENKO, N.A.; ZAYCHENKO, R., red.; NARINSKAYA, A., tekhn. red.

[Building machinery, machines, equipment, and instruments; a reference manual] Stroitel'nye mashiny, mekhanizmy, oborudovanie i instrumenty; spravochnik. Kiev, Gos.izd-vo lit-ry po stroit. i arkhit. USSR, 1961. 915 p. (MIRA 15:3)
(Construction equipment)

SLAVCHENKO, Nikolay Antonovich; LEBEDEV, A.S., nauchnyy red.; GLAZKOVA, Ye.I., red.; NESMYSLOVA, L.M., tekhn. red.

[Electric tools for assembly and repair work] Elektrifitsirovannyi instrument dlia montazhnykh i remontnykh rabot. Moskva, Proftekhizdat, 1963. 109 p. (MIRA 16:12)
(Power tools)

GLADKIY, Vladimir Ivanovich; LOBANOV, Mikhail Ivanovich; SLAVCHENKO, Nikolay Antonovich; BERGER, K., red.; VOLOSHCHENKO, Z., red.; GOLOVKO, L., red.

[Power equipment, electrical equipment, and plumbing installations in construction; a manual] Energeticheskoe elektrotekhnicheskoe i sanitarno-tekhnicheskoe oborudovanie v stroitel'stve; spravochnik. Kiev, Gos.izd-vo po stroit. i arkhit. USSR, 1964. 870 p. (MIRA 17:5)

SLAVCHENKO, N.A.[deceased]; KOMAROVA, S.G., red.

[Power tools in construction] Elektroinstrument v stroitel'stve; spravochnoe posobie. Kiev, Budivel'nik, 1965. 1965. 170 p. (MIRA 18:12)

SLAVCHENKO, Nikolay Antonovich; KYSVLEV, V.I., nauchn. red.; KARYAGIN, A.G., nauchn.; MUPKINA, V.G., red.

[Handbook on transformers for young workers] Spravochnik molodogo rabochego po transformatoram. Moskva, Vysshaia shkola, 1964. 230 p. (MIRA 17:7)

"how to repair the cone of the loudspeaker."
Radio, Sofiya, Vol 2, No 11, 1953, p. 46

SO: Eastern European Accessions List, Vol 3, No 10, Oct 1954, Lib. of Congress

SLAVCHEV, D.

The plasma as fourth part (condition) of substance. Nauka i tekh z mladezh no.10:7-8 '61.

(Nuclear physics)

SIAVCHEV, D.

Chemistry and bread. Nauka i tekhn mladezh 14 no.2:25-27 F '62.

SLAVCHEV, E.

Durability and heating of the drawing stone blocks. p. 21.
LEKA PROMISHLENOST. Vol. 5, no. 7, 1957.
Sofiia, Bulgaria.

SOURCE: East European Accessions List, (EEAL) Library of Congress, Vol. 6, No. 1, January 1957

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Ceramic washers for stretching machines. Tekh delo 498 4 9N '63.

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Alteration of the hereditary nature in birds by interspecies change of protein in the egg. N. S. Nesterov, G. Slavchev, and G. K. Kichev (V. P. Kolarov Agr. Inst., Plovdiv, Bulgaria). *Izvest. Akad. Nauk S.S.S.R., Ser Biol.* 1955, No. 5, 105-17.—About 10 ml. of protein substance was removed by hypodermic needle from a 3-day (or less) turkey egg and injected into a 3-day hen egg. On hatching the Leghorn hens thus produced are regarded as vegetative hybrids with improved characteristics. G. M. Kosolapoff

(2)

SLAVCHEV, G., d-r., st. asist. (Sofia); UZUNOV, G., d-r., asist.

Significance of the microelements for the animal organism. Prir i znanie 13 no.2:5-6 F '60. (EEAI 9:11)
(Hydrogen) (Oxygen) (Calcium) (Socium)
(Potassium) (Animals)

SLAVCHEV, Geno, dots.

Functional activity of the liver ir the organism. Prir i znanie 17 no.8:7-8 O '64.

1. Vasil Kolarov Higher Agricultural Institute, Plovdiv.

SLAVCHEV, I.

"Elena, Okoliya During the 10 Years of People's Government", P. 23. (GEOGRAFIIA, Vol. 4, No. 9, 1954, Sofiya, Bulgaria)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 6, June 1955, Uncl.

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A need for publication of a journal on gynecology and obstetrics.
Khirurgiia, Sofia 7 no.5:313-315 1954.

(GYNECOLOGY,
need for journal on gyn. & obst. in Bulgaria)
(OBSTETRICS,
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(PERIODICALS,
need for journal on gyn. & obst. in Bulgaria)

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Should cancer be considered as a local or generalized disease?
Akush. ginek. (Sofiia) 3 no.5:21-22 '64

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Significance of positive Galli-Mainini reaction in missed abortion. Khirurgiia 7 no.1:30-33 1954.

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(ABORTION,
*missed, with positive Galli-Mainini reaction)

SLAVCHEV N.

BOIADZHIEV, G.; SLAVCHEV, N.

Manual separation of the placenta. Khirurgiia, Sofia 7 no.5:257-263 1954.

1.I Gradski rodilen dom Tina Mirkova, Sofiia. Glaven Lekar prof. G.Boiadzhiev.

(PLACENTA,
manual extraction)

SLAVCHEV, N.

BOIADZHIEV, G., prof.; SLAVCHEV, N.

Examination of the uterus following labor. Khirurgiia, Sofia 7 no.6:321-327 1954.

1.IGradski rodilen dom Tina Kirkova, Sofiia. Glaven lekar prof. G.Boiadzhiev.

(UTERUS,
exam. after labor)
(PUERPERIUM,
exam. of uterus in)

SLAVCHEV N.

RAICHEV, R.; SLAVCHEV, N.

Problem of mola destruens. Khirurgiia, Sofia 7 no.7:407-413 1954.

1. I Gradskii rodilen dom Tina Kirkova, Sofiia. Glaven lekar: prof. G.Boiadzhiev.
(HYDATIFORM MOLE,)

SLAVCHEV,N.; DOTSEVA,St.; GANCHEV, Iv.

Studies on the effect of some spasmolytics during labor.
Akush. ginek. (Sofia) 2 no.5:1-12 '63.

*

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Aria-Stella phenomenon in pregnancy in uterus bicornis.
Akush. ginek. (Sofiia) 4 no.1[illegible]-71 '65.

1. Nauchno-izsledovatelski institut po akusherstvo i ginekologila (Direktor: prof. Br. Papazov).

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Studies on blood coagulation in relation to delivery. Akush. ginek. (Sofiia) 4 no.3:189-196 '65.

1. Nauchno-izsledovatelski institut po akusherstvo i ginekologiia, Sofiia (direktor: prof. Br. Papazov).

SLAVCHEV, R.; BEZHANOVA-BUCHAKCHIEVA, S.

"Antihuman hemolysin production tests." In Russian. p. 89

DOKLADY. Sofiia, Bulgaria, Vol. 12, No. 1, January/February, 1959.

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Experiments in preparing the specific gamma globulin against smallpox. Trudy epidemiol mikrobiol 8:153-155 '61 [publ.'62].

SLAVCHEV, S.

"Helping to Raise the Qualifications of Workers", p. 1. (TEKHNICHESKO DELO, Vol. 5, no. 112, Oct. 1953, Sofiya, Bulgaria).

SO: Monthly List of East European Accessions, LC, Vol. 3, No. 4, April 1954.

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AGRICULTURE

Periodical KOOPERATIVNO ZEMEDELIE. No. 10, Oct. 1958.

SLAVCHEV, S. We cooperators believe in science. p. 25.

Monthly List of East Europeans Accessions (EEAI) LC, Vol. 8, no. 3, March, 1959. Uncl.

SLAVCHEV, S.

"A Modification of the Method For Determining the Number of Micro-organisms in a Milliliter of Water. p. 41" (ZDRAVNO DELO) Vol. 6, No. 6, Dec. 1952, Sofiya, Bulguria

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(BACTERIA,
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SLAVE, T.

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Abs Jour: Ref Zhur-Khim., No 2, 1959, 6262.

Author : Slave, T; Finat, C.
Inst : [Lucrarile Inst. cercetari aliment.] .....
Title : Methods of Preservation of the Quality of Bottled Mineral Water.

Orig Pub: Lucrarile Inst. cercetari aliment., 1958, 2, 135-148.

Abstract: The effect of saturation of mineral waters with CO_2, stabilization of colloids and elimination of excess Fe was studied. In the case of bottling under atmospheric pressure, the saturation with CO_2 under the pressure of 2-3 atm (gage) is not effective without preliminary cooling. In order to avoid the introduc-

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137-1957-12-25453 D

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 12, p 357 (USSR)

AUTHOR: Slavenas, Yu. Yu.

TITLE: On the Problem of the Investigation of the Scale Factor in Fatigue Testing of Steel (K voprosu issledovaniya masshtabnogo faktora pri ustalostnom ispytanii stali)

ABSTRACT: Bibliographic entry on the Author's dissertation for the degree of Candidate of Technical Sciences, presented to the Kaunassk. politekhn. in-t (Kaunas Polytechnic Institute), Kaunas, 1957.

ASSOCIATION: Kaunassk. politekhn. in-t (Kaunas Polytechnic Institute), Kaunas

1. Steel-Fatigue-Scale factor 2. Steel-Fatigue-Bibliography

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L 10812-63

ACCESSION NR: AP3003403 S/0051/63/015/001/0009/0012

AUTHOR: Penkin, N. P.; Slavenas, I-Yu. Yu.

TITLE: Absolute f-values for resonance doublets of AgI and AuI

SOURCE: Optika i spektroskopiya, v. 15, no. 1, 1963, 9-12

TOPIC TAGS: f-values, oscillator strengths, absolute f-values, anomalous dispersion, Rozhdestvenskiy hook method, resonance doublets, Ag, Au

ABSTRACT: The anamalous dispersion, or "Rozhdestvenskiy hook," method was used to determine the absolute f-values for resonance doublets of AgI and AuI. The concentrations of absorbing atoms of Ag and Au were calculated using formulas derived by A. N. Nesmeyanov. For AgI, f_{3382} and f_{3280} were found to be 0.247 ± 0.004 and 0.506 ± 0.004, respectively; for AuI, f_{2675} and f_{2427} were determined to be 0.19 ± 0.02 and 0.41 ± 0.03. It was established that the sums of the f-values and the f-values for the resonance doublets of the principal series of group I elements with $(n-1)d^{10}ns$ electronic configuration decrease with

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